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ABSTRACT

The present invention relates to novel parathyroid hormone antagonists and methods for using such compositions. In particular, a pharmaceutical parathyroid hormone antagonist comprises a peptide having an amino acid sequence from between (SEQ ID No.2 [PTH₂₋₈₄]) and (SEQ ID No. 3 [PTH₃₄₋₈₄]), preferably between (SEQ ID No. 4 [PTH₃₋₈₄]) and (SEQ ID No. 5 [PTH₂₈₋₈₄]), or a conservatively substituted variant thereof exhibiting PTH antagonist activity and a pharmaceutical carrier or excipient. Such compositions can be used to effect the binding of parathyroid hormone to parathyroid hormone receptors, to treat a patient having hyperparathyroidism, to treat a patient having renal osteodystrophy, or to modulate *in vivo* calcium ion concentration in blood.